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# Folk Theories of Artifact Creation: How Intuitions About Human Labor Influence the Value of Artifacts

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## Abstract

What are the consequences of lay beliefs about how things are made? In this article, we describe a Western folk theory of artifact creation, highlighting how intuitive dualism regarding mental and physical labor (i.e., folk psychology) can lead to the perceived transmission of properties from makers to material artifacts (i.e., folk physics), and affect people's interactions with material artifacts. We show how this folk theory structures the conceptual domain of material artifacts by differentiating the contemporary lay concepts of art/craft and industrial production, and how it influences people's evaluations of different types of artifacts and their makers. We propose that the folk theory and lay concepts of art/craft and industrial production are best understood within a specific sociohistorical context, and review potential sources of cross-cultural and cross-temporal variation. We conclude by making recommendations for future research and examining the implications for promoting environmental sustainability and social justice in production systems.

## Keywords

folk theories, material artifacts, organizing framework, culture, sustainability

Other than the sky and some trees, everything I can see from where I now sit is artificial. The desk, books, and computer before me; the chair, rug, and door behind me; the lamp, ceiling, and roof above me; the roads, cars, and buildings outside my window, all have been made by disassembling and reassembling parts of nature . . . Virtually all urban sensual experience has been touched by human hands, and thus the vast majority of us experience the physical world, at least, as filtered through the process of design.

—Petroski (1992, p. ix)

It is precisely where the reach of the imagination meets the friction of materials, or where the forces of ambition rub up against the rough edges of the world, that human life is lived.

—Ingold (2013, p. 73)

As with many other species, *Homo sapiens* adapt to their environment by working with the material world to construct their niche (Laland et al., 2000; Odling-Smee et al., 2003; Oishi, 2014). Indeed, most of the human population now lives in a particular human niche—the urbanized, human-made environment (United Nations, 2017, 2018). It is a world made of material *artifacts*—objects “intentionally made or produced for a certain purpose” (Hilpinen, 2011, para. 1).<sup>1</sup> Thus, Petroski's (1992) depiction in the

quotation above likely resonates with the experience of many living in the increasingly urbanizing world.

Social psychology has done its share to shed light on the human–artifact relation—how humans interact with the world made of material artifacts. This has largely focused on the psychological implications of materialism and material possessions, namely, human interaction with material artifacts once they are created and possessed (e.g., Dittmar, 1992b; Gosling et al., 2002; Kahneman et al., 1990). Yet, recent research has begun to show that the *creation* of material artifacts—how a material artifact is conceived and manufactured—can play a significant role in the human–artifact relation, including how we perceive (e.g., Bullock & Reber, 2013; Gelman, 2013; Newman et al., 2014), cognize (e.g., Bloom, 1996; Gelman & Bloom, 2000; Kelemen & Carey, 2007), and interact with material artifacts (e.g., Job et al., 2017; Kreuzbauer et al., 2015; Smith et al., 2016). Although these insights have significant implications for sustainable consumption and production, as we will explicate below, this

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body of knowledge is scattered across different subfields of psychology and lacks integration.

The main aim of this article is twofold. First, we articulate the question of the human–artifact relation and its significance for sustainability and social justice. Second, we put forward a folk theory framework to make sense of the widely distributed literature that bears on the question of how the process of artifact creation influences the human–artifact relation. In particular, we characterize the *Western folk theory of artifact creation*, which integrates much of the literature about how people steeped in the Western cultural tradition interact with material artifacts. We will show that it is a culturally and historically constituted conception of creation, which underlies the contemporary lay concepts of art/craft and industrial production, and has consequences for people’s evaluations of artifacts and how they relate to and interact with the material artifacts. In the final section, we discuss future directions for research, by pointing to empirically testable implications of the current theorizing, and by further explicating the implications of the folk theory framework for environmental sustainability and social justice.

### Societal Significance of the Human–Artifact Relation

Human niche construction, and thus the human production, consumption, and disposal of artifacts, has been in balance with the rest of nature throughout most of the evolutionary and historical timescales of humanity. During the geological epoch of the Holocene, the Earth’s planetary system maintained “a safe operating space for humanity” (Rockström et al., 2009, p. 472), thanks to a variety of its processes operating in concert—atmospheric carbon concentration, biodiversity, nitrogen and phosphorus cycles, stratospheric ozone concentration, ocean acidification, and freshwater availability (Rockström et al., 2009). These conditions set the “planetary boundaries,” within which lies the optimal environment where human civilizations have thrived (Steffen et al., 2015). Since the Industrial Revolution, however, the ongoing activities of human niche construction appear to have exceeded the metabolic capacity of the Earth’s system, breaching or threatening to breach some of these planetary boundaries. So much so, that some have argued that the term, Anthropocene, should replace Holocene as the contemporary geological epoch, marking the significance of human (i.e., *Anthropos*) activities for geological processes (Crutzen, 2002; Steffen et al., 2011).

Against this background, the production and consumption of material artifacts has been put under scrutiny (e.g., De Graaf et al., 2005; Hamilton & Denniss, 2009). The material wealth of many countries has increased over the last century, showing what Nobel laureate, Angus Deaton (2013), called *The Great Escape*—the departure from widespread poverty and fear of material scarcity. At the same time, some national cultures appear to have shifted from

materialism to postmaterialism, where concerns for quality of life (including environmental concerns) assume priority over basic material needs for food, shelter, and security (Inglehart, 1990, 1995; Inglehart & Abramson, 1994). Many countries, however, have also demonstrated an increasing disparity between the rich and the poor, which has significant societal costs (e.g., Wilkinson & Pickett, 2009). Furthermore, another sense of materialism, defined as the prioritization of financial goals and acquisition of material possessions, tends to depress psychological wellbeing (e.g., Hurst et al., 2013; Kasser, 2016) at least in the contemporary, largely Western, industrialized socio-economic context.

Arguably, one of the potential drivers of these societal trends is the traditional approach to economic development known as the *linear economy*, in which production and consumption is viewed as a finite sequence of “make, use, dispose” (Andrews, 2015, p. 306). In the linear economy, the primary aim is to generate high volume outputs—what Stahel (2016) has described as “bigger-better-faster-safer” syndrome” (p. 436). This approach has been criticized as contributing to the overconsumption of resources and environmental degradation, by encouraging planned obsolescence and a “throw-away” culture (Andrews, 2015; Hellmann & Luedicke, 2018). Faced by a need to develop production and consumption systems that are both environmentally sustainable and socially just (i.e., providing enough to support everyone’s material needs, but avoiding exceeding planetary boundaries; Raworth, 2017), alternative economic models have been advocated, including a *circular economy* or “closed loop” approach, in which material resources are conserved as much as possible and waste is minimized (House of Commons Environmental Audit Committee, 2014; Stahel, 2016). Although it is encouraging that the circular economy has been discussed in disciplines such as business (e.g., Murray et al., 2017) and the industrial sciences (e.g., Andrews, 2015; Stahel, 2016), it has received little attention in social psychology (for an exception, see Hood, 2016). As we will explicate later, we believe a social psychological examination of how laypeople understand the transformation of materials in production processes (and how these understandings influence their consumption and treatment of material artifacts) would complement research on folk-economics (e.g., Boyer & Petersen, 2018) to help us consider this necessary transition.<sup>2</sup>

Most research attention on the social psychology of consumption has been directed to the relationship between *possessions* and the self (e.g., Haugtvedt et al., 2012). For example, it is well established that once possessed by an individual, material artifacts increase their value in the eye of the possessor (e.g., Beggan, 1992; Gawronski et al., 2007; Kahneman et al., 1990; Nesselroade et al., 1999; Reb & Connolly, 2007). Some material artifacts (e.g., clothes, cars) can signal their possessors’ identity (e.g., gender, social class; see, for example, Belk, 1988; Dittmar, 1992b; Dittmar et al., 1995, 1996), act as a basis of stereotyped impressions

(e.g., Dittmar, 1992a, 1994), reflect the possessors' personality characteristics (e.g., Gosling et al., 2002), and even shape the possessors' self-concept (e.g., Yeung et al., 2017). After consumption, possessions can be passed on to others (e.g., as family heirlooms), recycled, or disposed of as waste. Here, again, there is a growing literature on the social psychology of waste management and the recirculation of possessions (for reviews, see, for example, Adams et al., 2012; Steg & Vlek, 2009; Taylor & Todd, 1995; Varotto & Spagnolli, 2017).

We aim to contribute to this area by investigating how the creation of material artifacts is understood by laypeople, and how these beliefs affect the human–artifact relation. Most research on lay beliefs about artifact creation has been conducted in relatively isolated streams spanning social psychology, cognitive psychology, and consumer behavior. Previous theoretical reviews have tended to focus on one kind of creation – creative art (e.g., Bullot & Reber, 2013; Newman & Smith, 2018). However, as we have argued above, it is important to investigate other kinds of artifact creation, given the implications for the natural environment and the use of material resources. Therefore, our framework encompasses not only creative art but also craft and industrial production. In the following section, we outline a folk theory framework for how lay beliefs about the separation (or integration) of labor in the process of creation influences the perceived properties of artifacts. We suggest that, when thinking about the creation history of an artifact, people consider both where the idea for the artifact came from, as well as who actually made the artifact.

## The Western Folk Theory of Artifact Creation

In industrialized societies, the vast majority of material artifacts are produced in highly complex supply chains involving various collaborating industries and individuals. Nevertheless, we propose that lay people tend to simplify these complex systems as folk theories of artifact creation, that is, shared informal theories, which include ontological commitments about things that exist in the world (e.g., minds, bodies, souls, objects, etc.) and propositions about how they relate to one another (e.g., viewing the body as a vessel for the mind; Gelman & Legare, 2011; Sternberg et al., 1981). Our central claim is that people use these ontological commitments and conceptual propositions to guide their thoughts, affect, and behaviors toward artifacts, to develop cultural materials that are conceptually consistent with their folk theories, and to constitute the world of material artifacts that reflects and embodies these conceptual assumptions and propositions (e.g., Morling & Lamoreaux, 2008; Shweder, 1990). As a consequence, we suggest that folk theories of artifact creation, and their derivative cultural products, can profoundly impact human–artifact relations, in

particular, how people evaluate different types of artifacts and their makers.

## Ontology

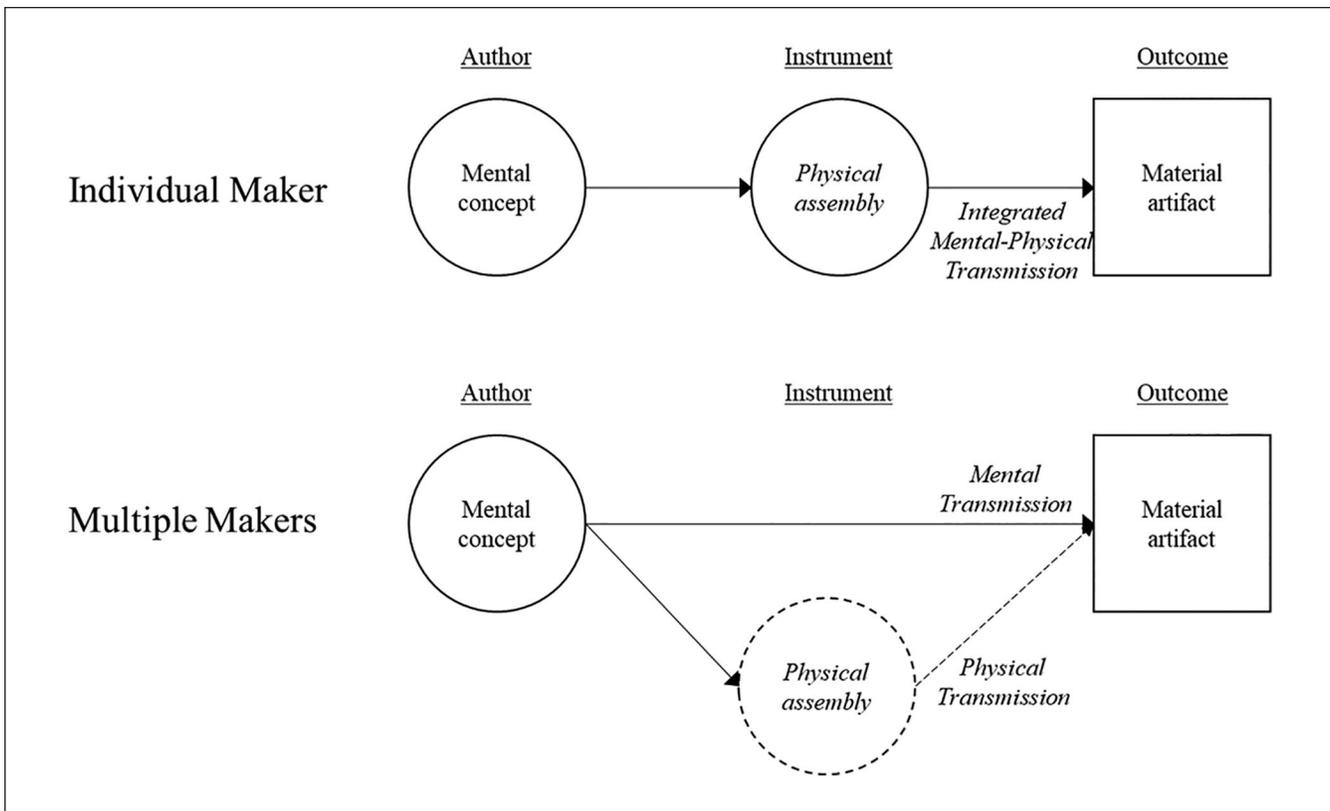
In the Western folk theory of artifact creation (Figure 1), creation involves two main stages: (a) an *author* first conceives the mental concept for the artifact, and then (b) the author uses an *instrument* (e.g., a body) to physically manufacture the material artifact (i.e., both of these stages typically occur within *a single individual*). Anthropologist, Tim Ingold (2013) similarly characterized the Western notion of “making” in terms of a hylomorphic model, whose origin may be found in Aristotle’s writings (Ainsworth, 2016). In a hylomorphic model, the creation process involves a linear series of steps with unambiguous start and end-points, which begins with the initial conceptualization of the artifact in the mind (i.e., generation of a mental idea, or a “form”), followed by the imposition of the mental concept onto passive raw materials (i.e., execution of the idea by physical labor), and concluding with a final action signaling that the mental concept is now satisfactorily embodied in the artifact.

In most cases, some humans are assumed to be involved in the production of an artifact, and we will refer to these humans with the general term, *makers*. In the prototypical case, a singular individual maker is involved, and given the folk theory assumption of mind–body dualism—the notion that creation requires both a mental form and physical labor (see also Newman, 2013)—both the mental and physical are localized in an individual (Figure 1, top). When there are multiple makers, there is usually a division of labor where some may take on the role of the author and others, the role of the instrument. For example, the author’s (e.g., designer) mental concept is transformed into a material artifact by the instrument’s (e.g., laborer) physical actions (Figure 1, bottom).

## Propositions About Ontological Entities

We suggest that there are three main propositions that link the entities stipulated in the Western folk theory of artifact creation: mental primacy, mind–body complementarity, and property transmission. Our central claim is that, given the ontology and propositions, the Western folk theory of artifact creation implies that the creation history of an object should play a significant role in its perceived value (see also Smith & Newman, 2014).

**Mental primacy and mind–body complementarity.** The proposition of mental primacy describes the general tendency to value the immaterial mind over the material body (e.g., Forstmann et al., 2012; H. M. Gray et al., 2007; K. Gray et al., 2011). This is reflected in the tendency for mental labor (i.e., the generation of ideas) to be more highly valued than physical labor in production systems in Western



**Figure 1.** The Western folk theory of artifact creation.

Note. The author's mental concept is materialized into a material artifact by the instrument's physical assembling of the materials. It is believed that makers' mental concept and physical essences are transferred to the material artifact (property transmission proposition). The dominant emphasis of the mental over the physical is illustrated by the use of solid versus dashed lines (mental primacy proposition).

industrialized societies. For example, most intellectual property (IP) laws are designed to protect the author's mental conception—sometimes before it has even been constructed in physical form—which implies that the skill required to *conceive* a new idea is considered more valuable than the skill required to *materialize* that idea (Burk, 2006; Sawyer, 2011). Conversely, as Risatti (2007) notes, the decline of handmade production and the rise of automation likely reflects a more general logic of, “if machines can do it, how important and creative can the process of execution be?” (p. 169). The proposition of mental primacy can also reflect the notion that exceptional ideas originate as a “light-bulb” moment within the mind of an individual genius (e.g., Elmore & Luna-Lucero, 2017; see also Sawyer, 2011; Schlesinger, 2009), and that this is the prototype of the marked beginning of the process of artifact creation. When multiple makers are involved, the mental primacy proposition is translated to the notion that the author will be given primacy over the instrument(s) in the creation process, which is reflected in a number of more specific cultural products. For example, the manufacturing stage of production can often be outsourced or automated without significantly impacting the value of the product, if the brand (i.e., the author) remains consistent.

Alongside the dominant proposition of mental primacy, there exists a complementary, even subversive, proposition of mind–body complementarity. This proposition suggests that the mental and physical processes are complementary, and an appropriate integration of the two completes the whole of artifact creation and produces a more valuable material artifact. It is when a mental idea is realized with effortful physical labor, skill, and ingenuity (i.e., via the “intelligent hand”; Sennett, 2008, p. 149), and therefore when the mental is integrated with the material via the body, that the act of creation is complete. We suggest that what Kruger et al. (2004) called the effort heuristic reflects this proposition, which is also linked to the belief that “labor is the source of value” (Boyer & Petersen, 2018, p. 4). The singular process of integrating the mental with the physical—the complement of the mental—is the essence of the hylomorphic model of creation, and thus materializing the mental concept in the physical object via skilled labor may constitute a significant aspect of the prototypical artifact creation in the Western folk theory.

Consistent with this analysis, there is some evidence to suggest that the proposition of mental primacy is the default assumption. For example, Li et al. (2013) found that young children in the United States tend to value the contribution

of ideas over physical labor in the context of making art (i.e., when directed to make a simple picture with shapes). Children tended to attribute ownership to the person who generated the idea rather than those who physically made it by following the idea. However, Li et al.'s (2013) findings may be specific to the context; since young children were producing the artworks, they may not have inferred that considerable skill was required for their production. In contrast, the assumption of mental primacy can be overridden by evidence of a significant contribution of *skilled* labor. Burgmer et al. (2018) found that adults tended to value the contribution of labor over ideas across both art and non-art contexts—attributing the ownership of an artifact and providing a greater monetary compensation to the person who physically made the artifact than the person who came up with the idea. This was observed when the execution of the idea presumably required sophisticated skills and great deal of effort (e.g., the “laborer” was able to single-handedly materialize the idea-generator’s idea in a complex output, like a film). Skill is defined as a scarce ability which takes time and effort to acquire (Hanagan, 1977). Therefore, the “effort heuristic” when applied to skilled labor might incorporate the degree of perceived effort required to master a skill; whereas the act of simply generating an idea, without also having the skill to materialize it in reality, may be viewed as impoverished. The results of the study by Burgmer et al. (2018) are more consistent with the mind–body complementarity proposition.

**Property transmission.** The proposition of property transmission refers to the lay belief that makers will transmit some of their properties to the material artifact that they produce (this has also been described as the artifact becoming a part of the maker’s “extended self”; Newman et al., 2014). In line with the mind–body dualist ontology, the Western folk theory of creation distinguishes two kinds of property transmission: “physical” and “mental” transmission (see Figure 1; see also Newman, 2013). P. A. White (2009) suggests that the property transmission belief underlies the widely held assumption that effects resemble their causes, that is, a property of the cause is transmitted to that of the effect. Thus, individuals will likely employ the property transmission heuristic to infer that the artifact’s properties (i.e., the “effects”) will resemble the maker’s (i.e., the “cause”) internal mental concept (i.e., mental transmission) as well as their physical or bodily properties (i.e., physical transmission). Consequently, the material artifact is believed to take on these makers’ properties, whether mental or physical, which then determine the nature and value of the artifact.

The mental property transmission proposition implies that the author’s mental concept will be embodied in an artifact, or that the artifact can be interpreted as a relatively accurate reproduction of the author’s internal mental “blueprint” (i.e., the artifact as a signifier and the mental concept as the signified; see also Kreuzbauer & Keller,

2017; Risatti, 2007). For example, people infer that an artwork visually reproduces a concept that was first held in the mind of the artist, prior to being materialized. Kreuzbauer et al. (2015) found that symbolic artifacts are particularly valued when they represent *one-to-one* materialized human expressions (i.e., where “the object becomes a form of isomorphic representation of the moment of creation,” p. 766). Kreuzbauer et al. also showed that physical contact was not a requirement for this form of property transmission (the effect was also limited to symbolic artifacts, not functional or aesthetic artifacts).<sup>3</sup> Therefore, mental transmission may not require direct physical contact with the object, but can potentially be envisioned to pass through other instrumental actors to the artifact during the process of production.

By contrast, in physical property transmission, human substances (even if imaginary) are believed to rub off onto artifacts via direct physical contact (this is similar to the notion of “contagion”; Nemeroff & Rozin, 1994). For example, positive emotional residue (e.g., the artisan’s love for the product; Fuchs et al., 2015; see also Savani et al., 2011) or an individual’s “soul” or self-essence (e.g., Newman et al., 2014) are believed to be physically transferred to an artifact via physical contact. The notion of physical transmission can encourage attention to visible traces of human contact on the artifact, such as unintentional markings generated during hand-making, or cues to intentional artistic gestures (e.g., Smith & Newman, 2014). It is possible that a single artifact could have *both* mental and physical forms of transmission, that is, the author’s mental concept can be represented in its form and it can also “contain” nonvisible physical substances.

### Psychological Consequences

The Western folk theory of artifact creation has psychological consequences for the evaluation of artifacts. This is because the propositions of mental primacy and mind–body complementarity entail value judgments, that is, the greater valuation of mental over physical labor, and the greater valuation of the integration of mental and physical labor over their dissociation. When a single individual conceives of and also assembles a unique artifact, this process may be seen to infuse the individual’s mental and physical properties through the process of property transmission and result in the creation of a complete and “authentic” artifact. This line of reasoning suggests that those who hold the Western folk theory of creation (i.e., Westerners) should place higher value on “authentic” artifacts than on duplicates. Indeed, empirical research has provided support for this implication (e.g., Gjersoe et al., 2014; Smith et al., 2016; Smith & Newman, 2014). In contrast to this act of integrative fusion, the mental or the physical stages in isolation may be regarded as somewhat incomplete. When the author and the instrument are different individuals and there is a division of labor, the

**Table 1.** Lay Concepts of Art/Craft and Industrial Production in Western Industrialized Societies.

Folk theory components	Art/craft	Industrial production
Author	Artist or artisan's mind	Brand
Instrument(s)	Artist or artisan's body	Laborer(s) or machines
Mental model	Embodies a human expression	Represents a product concept
Physical model	Transfer of soul or emotions	None
Artifact concept	Individualized	Multiple
Makers	Humanized	Mechanized

dissociation of the mental and physical labor generates a conceptual tension, and may be seen to result in an “alienation” of the mind and the body, with implications for the value of the artifact (see also Baumeister, 1987).

*Caveat.* In psychological and consumer research, the perceived value of artifacts has been measured in diverse ways, including general value (high/low value in isolation, or high/low value relative to a duplicate; for example, Kreuzbauer et al., 2015), monetary value (estimated price, willingness to pay, lottery simulations; for example, Fuchs et al., 2015; Job et al., 2017; Newman & Bloom, 2012; Smith et al., 2016), perceived quality (high/low overall quality; for example, Job et al., 2017), personal value (whether the person likes the object, or wants to buy, consume, touch, own, or show the object to others; for example, Job et al., 2017; Stavrova et al., 2016), distress at the prospect of the object being destroyed (e.g., Job et al., 2017), and perceived value to society (whether the object should be kept in a museum, put in a time capsule, or receive an award; for example, Valsesia et al., 2015). The effect of creation history on artifact evaluation is likely to depend on the kind of evaluation. For example, the property transmission of “love” may increase the personal value of an artifact, but have little influence on its perceived functional value.

Likewise, the Western folk theory of artifact creation is likely to have consequences for perceptions of the makers as well. As previously noted by Arendt (1958; cited in Volpato et al., 2017), workers could be considered either *homo faber* (i.e., skilled artisans who produce a whole object) or *animal laborans* (i.e., manual laborers who engage in isolated aspects of the production process). The dominant proposition of mental primacy suggests that directing attention to the body can reduce mind attributions, which contributes to the objectification of workers who primarily use their bodies. Indeed, empirical research supports this implication in regard to the infrahumanization of athletes (M. H. White & Molina, 2016) and the objectification of factory workers relative to artisans (Andrighetto et al., 2017). Thus, evaluations of makers will depend on the degree to which the maker is believed to be using their mind or their body in the process of artifact creation.

## Lay Concepts of Art/Craft and Industrial Production

Just as a naïve theory structures a conceptual domain that it pertains to (e.g., Murphy & Medin, 1985), the Western folk theory of artifact creation structures the conceptual domain of material artifacts. In particular, it sheds light on a conceptual distinction between lay concepts of art/craft and industrial production, and its implications for the human–artifact relation. These concepts involve different authors, instruments, and forms of property transmission, and have divergent consequences for the valuation of artifacts and makers (see Table 1). As we will explicate below, art/craft implies mind–body integration, whereas industrial production implies a dissociation between the mental and the physical in the context of industrialized societies. Therefore, the folk theory implies that art/craft artifacts are likely more highly evaluated than mass-produced artifacts, all other things being equal. Below, we describe each concept and provide empirical evidence (see Supplementary Material for a summary of the studies included in the review).

### The Lay Concept of Art/Craft

*Folk theory structure.* In the lay concept of art/craft, mind–body complementarity is salient; the individual artist or artisan is usually both the author (i.e., they originate the mental concept) and the instrument (i.e., they use their skilled labor to assemble the artifact).<sup>4</sup> Art/craft, therefore, usually includes a transmission of both mental and physical properties. The artifact is individualized, in part, because it is conceptualized and produced in a certain time and place, making it an artifact with a specific history that is impossible to recreate. Consequently, the general consensus regarding appropriate interaction with an artwork is to preserve it on display, and a craft object may be treated with care given the degree of effort that was invested in its production. The higher value of art/craft is best understood in opposition to “non-art/craft” forms of production, which we have labeled “industrial production.”

*Supporting evidence.* The lay concept of art has received the most attention from researchers in social and cognitive

psychology, encompassing several other psychological phenomena, such as intention-based contagion (Stavrova et al., 2016), the valuation of materialized human expression (Kreuzbauer et al., 2015), the valuation placed on individual effort in art (Smith & Newman, 2014), viewing artworks as part of the “extended self” (Newman & Bloom, 2012; Newman et al., 2014), the valuation of creative control (Valsesia et al., 2015), and temporal contagion (Smith et al., 2016). There is evidence of both mental and physical property transmission in art; observers see the visual form of artwork as representing the internal mental states of the artist and also see the individual artifact as containing physical properties transferred from the artist (e.g., the “individual essence” of the artist; Newman et al., 2014).<sup>5</sup> Similarly, Newman and Bloom (2012) have also identified physical contact and creative performance as the two main factors contributing to value of art.

In terms of supporting evidence for perceptions of craft, several studies have found that highlighting the role of humans in production processes can increase artifact value, relative to a control condition characterized by an absence of people (e.g., Abouab & Gomez, 2015; Fuchs et al., 2015; Job et al., 2017). For example, handmade artifacts are perceived to contain more “love” than machine-made artifacts (Fuchs et al., 2015), and food products produced manually are perceived to be more natural than products produced via automated processes (Abouab & Gomez, 2015). A recent study also found that a simple manipulation describing products as “made *by people* in a factory” compared with just “made by a factory” resulted in a perception that the products contained social traces of human warmth and friendliness, which was mediated by perceived agency over the creation process (Job et al., 2017). Participants in this study also expressed greater distress at the prospective destruction of the object, supporting the notion that artifacts made by people are seen as more intrinsically valuable. We suggest that these studies did not just imply physical contact with humans, but implied the use of skilled labor and an intrinsic motivation for the work (i.e., craftsmanship).

In terms of perceptions of the makers, research has found that artisans tend to be *humanized* relative to manual laborers (Andrighetto et al., 2017). Craft draws attention to skill, muscle memory, and the body as integrated with the mind (Risatti, 2007, describes this as the “thinking hand”), and is commonly seen as an activity that humans are naturally motivated to engage in. The supporting evidence for perceptions of artists is relatively sparse and complicated by different theoretical approaches (i.e., researchers have drawn on humanness theory, for example, Haslam et al., 2005 as well as mind perception theory; for example, H. M. Gray et al., 2007). One study found that artists tend to be animalized—viewed as high in human nature qualities (e.g., in touch with their inner creativity), but low in uniquely human qualities (e.g., impulse control; Loughnan & Haslam, 2007). Other research has found that “creative genius” is seen as

something natural, essential and unlearnable, that is both uniquely human (i.e., not possessed by animals) and central to human nature (i.e., not possessed by robots; Ritter & Rietzschel, 2017). Artists may also be associated with the stereotype of the “mad genius,” which has been problematized for associating creativity with psychopathology (Ritter & Rietzschel, 2017; Schlesinger, 2009).

### The Lay Concept of Industrial Production

**Folk theory structure.** In the lay concept of industrial production, the author is usually a brand or company, and the instruments are unidentified laborers (or machines). Unlike art/craft, the generator of the mental concept for an industrial product is likely to be a *collective* rather than a single individual (e.g., a team of product designers, inventors or scientists). However, usually this group is acting on behalf of a brand, which then claims ownership over the product concept and is viewed as the author. The mental property transmission involves the artifact representing the product concept of the brand. Unlike art and craft, there is unlikely to be any perceived physical transmission from the instrumental makers because the aim of industrial or mass-production is to produce standardized outputs, which requires the suppression of input from individual workers. Factory workers are also likely viewed as extrinsically motivated and therefore not experiencing “warmth” directed toward the object (unlike craft or art; Baumeister, 1987). In terms of the individualization of the artifact, Risatti (2007) argues that mass-produced artifacts are unusual recent developments that should be described with the special term, “multiples,” because they have no original version (i.e., designers send product concepts to manufacturers without first realizing them in material form; thus, there is no “original” to be copied or reproduced, only multiples of the same object).<sup>6</sup> Therefore, most mass-produced artifacts are viewed as disposable or replaceable.

**Supporting evidence.** Relatively little research has examined lay beliefs about industrial production *per se*. However, industrial production is often a core aspect of research on the valuation of human production—the “control” conditions in these experiments employ descriptors such as “machine-made,” “made by a factory,” or “automatic production” implying industrial production (e.g., Abouab & Gomez, 2015; Fuchs et al., 2015; Job et al., 2017). Interestingly, in a study investigating perceptions of the transfer of warm social traces during manual production (Fuchs et al., 2015), objects in the “machine-made” condition did not differ from a control condition with no production information, implying that industrial production either does not *reduce* warmth in objects, or alternatively, that it is simply the assumed default. There is also some evidence that people may view brands as intentional agents and perceive a “brand essence” in mass-produced artifacts (e.g., Kervyn et al., 2012). This is

particularly the case when the brand represents an individual person. For example, Smith et al. (2016) found a higher valuation of products with earlier serial numbers when products were created by a guest designer for a brand (e.g., Alexander Wang for H & M); however, this was not the case for products created by an abstract brand (e.g., H & M). For the guest designer, the effect of an earlier serial number on willingness to pay was mediated via perceived transferred of essence and higher quality.

It has been argued that industrial production systems can be objectifying and dehumanizing, and that factory workers are likely to be *mechanized* (i.e., viewed as low in both human nature and uniquely human qualities; Andrighetto et al., 2017; Baumeister, 1987 for a review of perceptions of low-status workers, see Volpato et al., 2017). For example, recent research has found that factory workers are objectified and denied mental states relative to artisans, particularly when the observer is asked to focus on their repetitive work activities (e.g., “mindless” labor), rather than on the laborer as a person (Andrighetto et al., 2017). There has been relatively little research on stereotypes of other makers in industrial production, such as designers.

## Cross-Temporal and Cross-Cultural Influences

In this section, we discuss the cross-temporal and cross-cultural influences on folk theories of artifact creation. It is vital to consider the cultural context when investigating folk theories of artifact creation, because the symbolic meaning and interpretation of artifacts is an intersubjective process that depends on the surrounding context (e.g., Chiu et al., 2010; Kashima et al., 2019; Kim & Markus, 1999; Morling & Lamoreaux, 2008). We define culture as socially shared information within a population that influences individuals’ thoughts, feelings, and behaviors (e.g., Kashima, 2016). We also take a multilinear view of cultural change that suggests that, while there may be some general trends in cultural change as societies industrialize, the presence of other factors will result in multiple trajectories of cultural dynamics.

### Cross-Temporal Perspectives

The historical context has significantly shaped the contemporary Western folk theory of artifact creation and the conceptual distinction between art/craft and industrial production. Prior to the 18th century, production in Western societies was generally understood as a unified concept of human skill in making things (i.e., a fusion of mental and bodily activities, or mind–body complementarity; Risatti, 2007; Shiner, 2001). Pre-modern production was usually requested by a patron, created collaboratively by a team of artisans and intended to serve a function in a specific context. However, the rise of the middle-class and a shift to an art market orientation contributed to a new conceptual

divide, involving the invention and elevation of the concept of “fine art” (i.e., artifacts created primarily for aesthetic contemplation), relative to the downgrading of the “decorative” or “applied” arts (i.e., artifacts created primarily for functional purposes; Shiner, 2001). In this modern view, art was highly valued for its creativity and evidence of lone creative genius (i.e., mental labor), whereas the applied arts were viewed as simply adhering to cultural rules (i.e., physical labor). The invention of fine art also reproduced existing power and status inequalities in society; many of the “applied” arts became devalued and viewed as “feminine” hobbies, and art produced by non-Western cultures was assigned the imperialist label of “primitive art” (Shiner, 2001).

The Industrial Revolution and subsequent industrialization also facilitated the dissociation between mental and physical labor. To begin with, industrial production has prompted the division of labor; specifically, the division of the production process of a single artifact into subparts that are completed by different people (Baumeister, 1987; Durkheim, 1933). This has resulted in the invention of the roles of designers (i.e., mental labor) and factory workers (i.e., physical labor), presenting a challenge to the proposition of mind–body complementarity. Given the proposition of mental primacy, bodily activities are often devalued relative to mind activities (Marx & Engels, 1844/2009). For example, factory workers were expected to perform isolated and repetitive tasks in the manufacturing process, rather than having highly specialized skills contributing to the overall production of an artifact.

With industrialization, craft objects became scarce, which likely increased their perceived value. It has also been argued that with the division of mental and physical labor, the notion of skilled labor is devalued, and along with it a form of creativity or *improvisation* that is generated in the process of skilled interaction with materials (Ingold, 2013; Risatti, 2007; Sennett, 2008). The belief that craft artifacts contain “love” may also derive from the assumption that the integration of mental and physical labor is intrinsically rewarding, which may be distinctive to postmaterialist societies in which industrial production has become the predominant form of production (see also Ocejo, 2017). The belief that craft artifacts contain “love” may also be specific to cultural contexts that have a strong divide between work and personal life (see, for example, research on the Protestant Relational Ideology; Sanchez-Burks, 2004). Related to this, a desire to support traditional artisans may be linked to beliefs (particularly in Western industrialized societies) that societal change is reducing warmth in society (e.g., Kashima et al., 2009) or threatening long-standing cultural traditions (e.g., Torelli et al., 2011), leading to a nostalgia for pre-industrial production and a desire for mind–body complementarity. Thus, some manifestations of a “craft revival” could be specific to societal contexts where industrial production has become the dominant form of production (Spooner, 1988) and is likely to

take different forms in different societies (see Kikuchi, 2015, for a perspective on the craft debate in Japan).

### Cross-Cultural Perspectives

According to Ingold (2013), *morphogenesis* (i.e., how biological organisms grow) provides an alternative model of artifact creation to the hylomorphic model that provides the basis for the Western folk theory. In a morphogenetic model, all matter is in flux and human manipulation of materials can only involve intervention into ongoing forces in the world that are already at play (i.e., the maker temporarily joins forces with the materials during creation, but once “created,” the artifact will continue to experience material transformations). This alternative view emphasizes the ongoing interaction between humans and materials over the imposition of a mental concept on the passive material world. This model resembles Lévi Strauss’s (1966) *bricolage*, something akin to traditional craftpersonship. Intriguingly, in the research on lay theories of creativity, Eastern concepts of creativity have been argued to focus on recursive transformations of concepts already in existence in contrast to Western conceptualizations of creativity which place greater importance on mental forms of creativity and envisage a linear trajectory with a clear beginning and end-point (Lan & Kaufman, 2012; Lubart, 2010; Paletz & Peng, 2008; Sawyer, 2011, but see Sundararajan & Raina, 2015, for a recent critique of cross-cultural research on creativity). This distinction appears to mirror the linear versus circular assumptions underlying Ingold’s hylomorphic and morphogenetic models of making.

Since, as we have argued, the author’s intentions are a key element of folk theories of artifact creation, differences in attending to mental states may contribute to cultural variation in the valuation of different kinds of artifacts. Research suggests there is a cross-cultural difference in the importance of intentions when interpreting others’ behavior (Barrett et al., 2016; Lillard, 1998). In some cultures, social norms dissuade people from inferring mental states as explanations for behavior (Robbins & Rumsey, 2008). For example, individuals in large-scale industrialized societies tend to rely on inferences about intent when making moral judgments, whereas individuals in some small-scale societies focus less on intent (Barrett et al., 2016; Lillard, 1998). In addition, religious influences contribute to a focus on intentions; although both Protestants and Jews judge the morality of others’ actions, Protestants judge the morality of others’ thoughts as well (Cohen & Rozin, 2001).

Cross-cultural differences in the valuation of uniqueness may also contribute to cultural variability in folk theories of artifact creation. Both art and craft produce an individualized artifact; therefore, owning unique artworks or crafts could function to communicate the uniqueness of the consumer (e.g., Kim & Sherman, 2007). As well, the degree that children value scarce objects is higher in cultures that value

uniqueness (Diesendruck et al., 2019). There also appears to be cross-cultural variability in the value placed on artifacts made by *individual* authors and the perceived transfer of their “essence” to these objects. For example, one study identified a cross-cultural difference in the value placed on duplicates of objects that were associated with a unique individual (Gjersoe et al., 2014). Participants in the United States were more likely than participants in India to devalue a duplication of a sweater owned by a celebrity or painting made by a famous artist; however, there were no differences between the groups on the perceived value of duplicated naturally occurring objects. This suggests that the U.S. participants were attending more to the presence of an invisible “essence” in the object associated with the celebrity (which would be missing from a duplicate), beyond its aesthetic or functional quality. This difference was interpreted as due to a higher value placed on unique individuals in individualistic cultures.

### Relationship to Other Psychological Mechanisms

In the previous sections, we have focused on the role of folk theories of artifact creation in the valuation of artifacts. However, we recognize that these are not the only source of value for artifacts (see also Kreuzbauer et al., 2015; Smith & Newman, 2014), and that the salience of the creation history of an artifact is related to other factors that contribute to perceived value, such as perceived quality, scarcity, and association with an identified individual. Nonetheless, we believe that the folk theory framework can help understand value discrepancies between objects that would ostensibly share these other factors.

First, it may be assumed that artifacts made by people will also be of higher quality. This would be consistent with valuing art and crafts over industrially produced objects, due to the perception that someone has invested more care in the production process. However, Job et al. (2017) also found that highlighting the role of “people” in object creation increased the monetary value of the artifact, but did not increase its perceived quality. The authors attributed this effect to the perceived transfer of nonvisible “social traces” to the object. Therefore, property transmission can potentially increase the value of artifacts, without changing the quality or functionality of the artifact.

Second, it is possible that human-made artifacts are more highly valued simply because they are scarce. Although artworks and crafts, due to the nature of their production, are rarer than industrially produced artifacts, and this may be a factor contributing to higher valuations, we also propose that the relative scarcity of these objects cannot wholly account for their value. Rather, their value is due to the belief that someone has invested their love (craft) or self-essence (art) in the object during its production, and that the form of the artifact can reveal something about the author’s mental states or level of skill. This is demonstrated by research examining

the valuation of duplicated artworks, which shows that even when the duplicate is just as scarce as the artwork (i.e., the artwork has been destroyed and only the duplicate is now in existence), the duplicate is still valued less than the original artwork (Newman & Bloom, 2012).

Third, a related source of value could be identifiability: the notion that some objects are valued because they are associated with an identified maker. This is somewhat incorporated into our framework; however, the folk theory framework provides a more nuanced explanation of the mechanisms underpinning value judgments. For example, we would hypothesize that even when an object is labeled as produced by an identified individual, the value of the object will depend on the degree of *authorship* attributed to the individual (i.e., if they are described as an “artist,” “artisan,” or “factory worker”; Judge et al., 2020). In addition, there may be an interaction between the individualization of the maker and their work role (i.e., the positive effect of an identifiable artist may be stronger than the effect of an identifiable factory worker).

## Discussion

In this article, we have described a culturally and historically constituted Western folk theory of artifact creation and showed how it structures the conceptual domain of material artifacts, highlighting the key features differentiating contemporary Western lay concepts of art/craft and industrial production. This framework implies a number of testable propositions that can be empirically examined in future research, and potential implications of this research for promoting environmental sustainability and social justice.

### Testing Propositions

At present, little empirical research has attempted to map the content of lay concepts of artifact creation. Lay beliefs across cultures could be explored and compared using free association or prototype elicitation techniques, in which participants freely generate words that they associate with a concept and these lists are then condensed and clusters identified (e.g., Walker & Pitts, 1998). For example, in a pilot study, Fuchs et al. (2015) recorded free associations with the word, “handmade” and identified that “love” was a common theme (in addition to the perception of greater time spent on the creation process, and higher uniqueness of the product). Alternatively, future research could develop scale items to measure the ontological assumptions underlying the concepts; for example, the belief that art is a “window to the soul.”

It would be informative to empirically examine the proposed differences between the lay concepts of art/craft and industrial production. This research could involve experiments that present an artifact described as produced in an art, craft, or industrial production setting, and then measuring

outcomes such as the perceived “author” or “instrument,” artifact properties, artifact value, and perceptions of the makers. More research is also needed to examine how the folk theory framework relates to factors such as perceived scarcity. For example, as noted by an anonymous reviewer, it is not yet clear how perceptions of art or craft artifacts differ from perceptions of naturally occurring scarce objects (e.g., moon rocks), and how art or craft artifacts containing the “essence” of the maker differs from objects containing the “essence” of a famous celebrity, due to physical contact.

Another avenue for further research is to investigate the proposed hierarchical organization of the concepts and the boundary points at which one concept shifts to another, by exploring responses to hybrid objects. For example, there may be a perceived limit to the number of objects that can be imbued with “love” during handmade production, after which it starts to be seen more like mass-production.<sup>7</sup> It is also possible that there may be competition between the kinds of “essences” that can be transferred to objects. For example, perhaps when a small-scale producer is combined with a large multinational brand, there will be competition between the warm social traces of the producer and the “brand essence” of the larger brand.

Future research should also explore the type of artifact as a potential moderator of the effects of different creation contexts. The salience of creation history is likely to be limited to a certain set of products, in part because interacting with the physical environment would be extremely challenging if we were constantly attending to object histories. Indeed, most of the reviewed research identified some boundary conditions for their effects. Kreuzbauer et al. (2015) found that the higher valuation of objects as materialized human expression was only significant when the product’s symbolic properties were salient. A recent study could provide some insight into when and why concepts of artifact creation will be salient (Waytz & Norton, 2014). This study examined which work roles people prefer to be performed by humans rather than by robots. The authors found that participants were less comfortable with prospective automation when the work was believed to require the capacity for emotion (Waytz & Norton, 2014). It may be that art/craft production and physical transmission is especially relevant for products that are seen to benefit from human emotion.

### Implications for Sustainability and Social Justice

As reviewed in the introduction, current processes of human niche construction are threatening to exceed planetary boundaries, and it is important to transition toward more sustainable and socially just production systems (e.g., Raworth, 2017). Part of this will require addressing “throwaway culture” and encouraging a transition from a linear economy to a circular economy. Since laypeople can play a key role in this transition as both citizens and consumers, social psychological inquiry into how lay people understand artifact

creation is one potential avenue for developing interventions to promote sustainability. We suggest some promising areas for future research below.

**Reducing overconsumption and waste.** Folk theories of artifact creation could be applied to better understand consumer decision-making during purchases. For example, industrially produced goods are viewed as less intrinsically valuable, and therefore the lay concept of industrial production may encourage “fast fashion” purchases and waste. A related area of research has found that providing product updates causes consumers to devalue their existing versions of the product and encourages unnecessary new purchases (Bellezza et al., 2017). Raising consumer awareness of the concept of planned obsolescence in industrial production (i.e., where companies intend for the product to become obsolete, in terms of functionality, design or desirability; Hellmann & Luedicke, 2018) may promote consumer demand for higher quality, longer lasting products that are more likely to be retained or recirculated. However, as noted by William Morris as far back as the 1800s, there remains a tension between promoting the uptake of well-crafted, durable goods, and ensuring that products are affordable for all (Van Helvert, 2016).

To reduce overconsumption, it is also important to encourage purchases of recycled or repurposed goods. Although some authors have focused on the need to improve the social status of owning recycled or repaired products (e.g., Hood, 2016), research on folk theories could also be useful for considering how to neutralize the negative contamination of used products (see also Huang, Ackerman, & Sedlovskaya, 2017; Nemeroff & Rozin, 2018). For example, adding new “authorship” cues may imply a specific creation start point, leading people to disregard transformations and contaminated essences before that point. Alternatively, in some cases, maintaining an imagined connection to the previous user may increase the value of the object; for example, if there is a sense of shared identity (Hood, 2016). In addition, research has shown that individuals value having the ability to build their own products (the “IKEA effect”; Norton et al., 2012). This could be used to promote the contemporary Maker Movement and the spread of FabLabs, in which individuals are able to use open-source designs and public tools and spaces to create customized on-demand artifacts (Wolf-Powers et al., 2017). On a broader level, it could be useful to interrogate the common-sense separation between producers and consumers, as illustrated by Ingold’s (2013) explanation of the linear conceptualization of the making process. Potentially, individuals could be reframed as “stewards” of materials rather than “consumers” of products, and this could encourage product longevity.

The folk theory framework could also be drawn upon to better understand conceptualizations of “natural” versus “artificial” production. Although “craft” technically involves the creation of human artifacts, it may be viewed

as analogous to a *natural* process (i.e., something that the humans have been doing for millennia). Risatti (2007) suggests that a craft approach to artifact creation is believed to preserve the “natural” essence of materials, due to the perceived limitations to what can be achieved by human hands and the imagined harmony between human manipulation and natural materials. In contrast, machine production imposes human will on natural materials by force. Related to this proposition, a recent study found that “manual” production, compared with “automatic” production, was seen as more likely to preserve the natural essence of the product (Abouab & Gomez, 2015). Although, on one hand, the belief that craft production is natural might be useful for encouraging support for more sustainable forms of production, conversely, on the other hand, if some forms of craft production are less sustainable, beliefs about the naturalness of craft may lead to resistance to counterevidence or provide a “sustainable” gloss over environmentally damaging production systems.

Another interesting area could be to investigate lay perceptions of the current “throwaway culture” in relation to the continuity of collective identities. For example, Van Helvert (2016) asks “what would future archaeologists think of our time?” (p. 12) and proposes that they would simply find “the leftovers of an age of rampant, imperishable objects.” This might imply that future societies may look down on the consumption habits of present-day society. Another aspect to this could involve investigating which material artifacts are considered “cultural heritage,” and how individual makers produce artifacts with enough significant cultural value to be preserved in a museum (e.g., Valsesia et al., 2015).

**Addressing social justice in supply chains.** It would be useful to investigate whether increasing the salience of makers and the amount of labor that has gone into making a product can increase willingness to support the maker, as well as producing higher intentions to take care of that product. For example, in a recent news article, an environmentalist was quoted as saying, “Once you start to understand that there are women . . . in Dakar who produce [the clothes], if I buy something and I don’t care for it, I’m actually not respecting that woman” (Spring, 2018). This also has implications for the recycling and reuse of secondhand goods; it is possible that crafted artifacts will be more likely to be recycled or re-gifted than mass-produced artifacts, due to the belief that the maker was emotionally invested in the object and has thus retained some degree of entitlement over the use of the object (Levene et al., 2015). Conversely, it would be useful to explore whether raising awareness of the exploitation of workers in supply chains would increase calls for workers’ rights as well as resulting in the perceived *negative* contamination of artifacts (e.g., with the workers’ negative emotions). Another interesting possibility is whether this relative anonymity of the makers in industrial production raises concerns for consumers, in a similar way to how the impersonal

market can be seen as dangerous or threatening (Boyer & Petersen, 2018).<sup>8</sup>

The folk theory framework in this article provides avenues for considering the relationships between consumers and distant producers in supply chains (United Nations Educational, Scientific and Cultural Organization, 2010). Theorists in other disciplines have argued that the dehumanization of outgroups can paradoxically *increase* the perceived value of their cultural products, due to these products appearing exotic and authentic (Hull, 2016). One study found that people higher in prejudice were more likely to value a product created by an outgroup member (McIntyre et al., 2015). The authors explained this effect as overcompensation in order to avoid potential accusations of prejudice. An alternative explanation is that people who tend to essentialize social groups are also more likely to exoticize the creative products of an outgroup member as reflecting folk art or cultural traditions, rather than the author's personal artistic creativity. This suggests that organizations aiming to promote social justice via consumption should carefully consider the relationship between the consumption of products and perceptions of makers in market exchanges.

Another potential area for future research concerns the perceived ownership models associated with art/craft and industrial production, that is, who is the "author" and therefore who is believed to own the mental concept of the artifact. This research relates to the protection of intangible cultural heritage and the IP of traditional makers. In IP law, it has been difficult to provide protection for collectively owned traditional knowledge, leaving open the prospect of traditional knowledge being appropriated and patented by corporations (Dutfield, 2017). It is possible that, in the lay concept of craft, the dominant ownership model is the collective ownership of cultural traditions, or *stewardship*, whereas in the concept of industrial production, the dominant ownership model is IP (for a review of the assumptions underlying IP law, see Sawyer, 2011). These two ownership models come into conflict in instances of cultural appropriation of traditional designs by global brands (e.g., Larsson, 2015).

From the other side, there are also increasing trends toward national governments creating protected geographical indications (PGIs) for culturally relevant products, which specify that products can only be produced in one place and often only using certain processes, to be able to qualify as a particular product concept (e.g., Champagne, Scotch whiskey, Belgian chocolate; Hull, 2016). PGIs have been described as attempts to "brand" cultural heritage and claim a form of ownership over traditional cultural knowledge and skills (Hull, 2016), which has implications for wider debates about *who* has the authority to claim collective ownership over cultural heritage. Applying this notion to the context of property transmission to artifacts, potentially, even when the physical production processes remain the same, a transfer in perceived authorship may shift the salient creation concept,

which may also influence the perceived nonvisible properties of the artifact.

It would also be interesting to use the folk theory framework to explore potential gender differences in attributions of authors and instruments, as well as the perceived ownership of their creative ideas. In recent research, depending on the domain and degree of risk involved, the greater attribution of masculine-agentive thinking to men than women contributed to a gender bias in the perceived deservingness of a reward for creative ideas (Proudfoot et al., 2015). Even the metaphors that are used to describe different kinds of creativity can have gendered associations; ideas generated by "light-bulb" moments (i.e., effortless and sudden) are rated as more exceptional than ideas described as "seeds" (i.e., involving effort and slow development), and male inventors are more likely to be described as a genius when attributed a "light-bulb" moment than a "seed" moment, whereas the opposite is true for women (Elmore & Luna-Lucero, 2017). This was described as a congruency effect arising from gendered stereotypes of creativity (i.e., men are believed to have a more innate creative ability to produce "light bulb" moments; Elmore & Luna-Lucero, 2017). Recent research has also shown the detrimental outcomes of the cultural association between maleness and genius, describing a job as requiring brilliance (versus dedication) increased feelings of anxiety in women and lowered interest in pursuing a career in some academic fields (Bian et al., 2018). It would be useful to extend this research to the context of creative industries and their material products.

## Conclusion

Lay beliefs about how artifacts are made can have significant consequences for how we perceive and interact with the material world. In this article, we have conducted a comprehensive review of research on how people respond to information about the creation history of artifacts. We have described a Western folk theory of artifact creation that distinguishes lay beliefs about mental and physical labor, and draws connections with the subsequent properties of material artifacts. We argue that individuals in Western societies tend to place higher value on the contribution of the mental process, a mental primacy proposition, which contributes to an emphasis on mental over physical forms of property transmission. However, there is also a mind-body complementarity proposition, which emphasizes the integration of mental and physical labor in skilled production. This is a novel contribution that extends existing knowledge in this area, by providing a general folk theory framework that can be applied beyond the specific context of creative art. We have also discussed the specific cultural and historical origins of the Western folk theory, and how folk theories may differ in non-Western contexts. Finally, we have proposed how folk theories of artifact creation can be drawn upon to inform efforts to promote environmental sustainability and social

justice in global supply chains. This theoretical framework is important for developing research to address the broader societal consequences of production and consumption systems in industrialized societies. We hope that this article will provide a foundation for developing testable propositions that can be used to stimulate a range of new social psychological research in the area of human–artifact relations.

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### Supplemental Material

Supplemental material for this article is available online.

### Notes

1. There is another sense of the term “artifact” that refers to *any* object that has been shaped by some form of human interaction, not just intentional action (Hilpinen, 2011). However, for the purposes of our research, we will focus the intention-based meaning of the term. In addition, although the term “artifact” is sometimes used more broadly to include intangible human creations (e.g., language), in this article, we focus on *material* artifacts.
2. In this article, we focus on the consumers’ perspective rather than the producers’ perspective, primarily because most individuals engage in consumption of material artifacts, whereas relatively fewer individuals would consider themselves “producers” or “prosumers” (see the Discussion section for more on this point). However, we would also expect overlap in the perspectives of consumers and producers. Research on artists’ motivations seem to share a number of similarities with the consumers’ perspective (e.g., the Western cultural ideals of uniqueness and authenticity can motivate artists’ creative endeavors, as well as consumers’ valuation of their artworks; Stamkou et al., 2018).
3. There is also some overlap between the mental model and Stavrova et al.’s (2016) concept of “intention-based contagion,” describing inferences that the *morality* of creators will be reflected in their creative products. However, their research differs slightly from what we are proposing, because it focuses on the transmission of the creator’s morality, rather than the author’s mental “blueprint” for the object.
4. In craft, the artisan can also act as more of a *conduit* for traditional concepts that have been passed down through generations, rather than generating their own unique artistic expression (i.e., a lesser degree of primary authorship than art).
5. Evidence that some artists employ other people to assist in the manufacture of their artworks (for example, 1,600 artisans were employed to work on Ai Weiwei’s “Pumpkin Seeds”; Petry, 2011) implies that the mental form of property transmission is relatively more important than the physical form, in art contexts.
6. Indeed, Risatti (2007) concludes that multiples “not only displace the original from its position atop a hierarchy of creative objects, they dissolve the hierarchy itself and with it our traditional basis for understanding the creative act through the physical object” (p. 175).
7. Along similar lines, Newman et al. (2014) asked, “Is there a limited quantity of the essence, such that there are a finite number of objects that can be seen as extensions of the self?” (p. 659).
8. For example, a recent opinion piece in *The Guardian* was titled, “Who should feed the world: real people or *faceless* [emphasis added] multinationals?” (Vidal, 2018).

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